

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A process for treating a ~~polyimide in the form of a~~ membrane of the type used in gas separation or pervaporation, the membrane comprising polyimide, the process comprising the steps of:

(a) directly exposing said polyimide to a ~~compound selected from the group consisting of dendrimers, hyperbranched polymers and mixtures thereof, wherein the compound crosslinks the polyimide and wherein the exposing is conducted at less than 100°C in a solvent selected from the group consisting of alcohols, ketones, ethers, esters and mixtures thereof, and~~

(b) maintaining said solvent containing said exposed polyimide and said ~~compound-dendrimer~~ at a temperature of less than 100°C and for a time to allow the compound to crosslink the polyimide.

2. (cancelled)

3. (cancelled)

4. (currently amended) The process of claim 1 wherein said ~~compound-dendrimer~~ comprises a plurality of amine groups.

5. (currently amended) A process according to claim 4 wherein at least two amine

groups per molecule of said ~~compound~~ dendrimer are primary amine groups.

6. (cancelled)

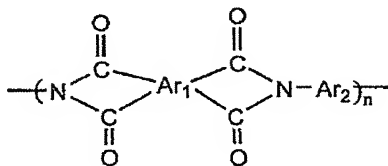
7. (cancelled)

8. (currently amended) The process of claim 7_1 wherein the dendrimer is a polypropyleneimine dendrimer.

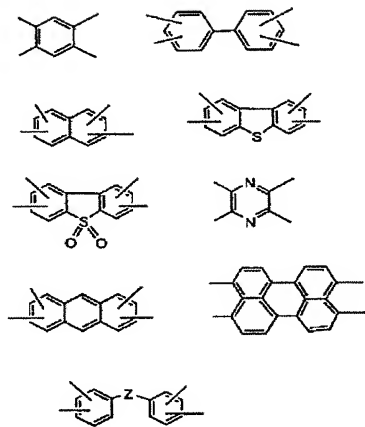
9. (currently amended) The process of claim 7_1 wherein the dendrimer is of generation up to 4.

10. (original) The process of claim 1 wherein the polyimide is an aromatic polyimide.

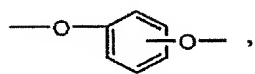
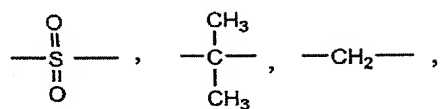
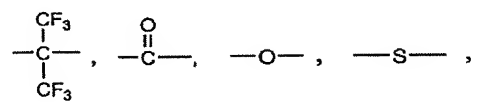
11. (original) The process of claim 1 wherein the polyimide comprises the following structural unit:



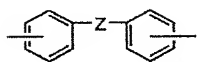
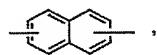
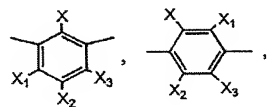
wherein Ar₁ is a tetravalent organic group selected from the group consisting of:



wherein Z is selected from the group consisting of:



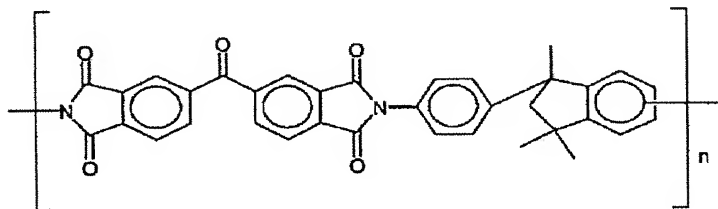
Ar₂ is an aromatic group selected from the group consisting of:



wherein Z has the same meaning as defined above, and

X, X₁, X₂ and X₃ are independently selected from the group consisting of hydrogen, alkyl groups with 1 to 5 carbon atoms, alkoxy groups with 1 to 5 carbon atoms, phenyl groups, substituted phenyl groups, phenoxy groups and substituted phenoxy groups;
and
n is a number sufficient that the polyimide has an inherent viscosity of at least 0.3 dl/g when measured at 25°C using a 0.5% by weight solution in N-methylpyrrolidinone.

12. (original) The process of claim 1 wherein the polyimide is selected from the group consisting of: polyimides comprising groups delivered from benzophenone tetracarboxylic anhydride (BTDA), methylene diisocyanate (MDI) and toluene diisocyanate (TDI),
and
polyimides of structure:



13. (currently amended) The process of claim 1 wherein the ~~compound~~dendrimer is dissolved in ~~an~~a solvent.
14. (original) The process of claim 13 wherein the solvent is an alcohol.
15. (currently amended) The process of claim 13 wherein the concentration of the ~~compound~~dendrimer in the solvent is between about 1 wt% and about 30 wt%.

16. (canceled)
17. (previously presented) The process of claim 1 wherein said solvent is a first solvent, said process additionally comprising the steps of washing the membrane with a second solvent after said exposing, and of drying the membrane after said washing.
18. (cancelled)
19. (cancelled)
20. (cancelled)
21. (cancelled)
22. (cancelled)
23. (cancelled)
24. (cancelled)
25. (cancelled)
26. (cancelled)
27. (cancelled)

28. (cancelled)

29. (new) The process of claim 1 wherein said solvent is selected from the group consisting of alcohols, ketones, ethers, esters and mixtures thereof.

30. (new) The process of claim 1 wherein the dendrimer is of generation 0 or 1.